

Date: Wednesday, 1/31/2007 2:19:07 PM
 User: Kim Johnston

Process Sheet

Customer	CU-DAR001 Dart Helicopters Services		Drawing Name	: BLADE		
Job Number	: 30556					
Estimate Number	: 10327					
P.O. Number	: N/A		Part Number	: D2741		
This Issue	: 1/31/2007 S.O. No. : N/A		Drawing Number	: D2741 REV C		
Prsh Rev.	: NC		Project Number	: N/A		
First Issue	: N/A		Drawing Revision	: C		
Previous Run	: 29868 Type : MACHINED PARTS		Material	: N/A		
Written By			Due Date	: 2/20/2007 Qty: 40 Um: Each		
Checked & Approved By						
Comment	: Est Rev: D 00.11.15 Removed P/O turning - in house process EC Est Rev: E 06-03-20 As Per Rev C JLM Est Rev: F 06.04.20 Added grinding after heat treating E C					

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :	
1.0	M4130NB0500X03000	4130 Bar 0.5 x 3.0"	
			
		Comment: Qty.: 1 f(s)/Unit Total : 48 f(s) 4130 BAR 0.5 x 3.0"	
		Material: 4130 steel bar 0.50" x 3.00"	Batch: _____ M102544 12 M102649 36
2.0	BAND SAW	BAND SAW	
			
		Comment: BAND SAW Cut blanks 13.850" long +0.063" -0.000"	MS 07/03/04 40
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1	
			
		Comment: HAAS CNC VERTICAL MACHINING #1 1-Machine per folio FA108	MS 07/03/04 40

J.F. / MS 07/03/04 40

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: Date: 0704/08
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07/02/08	3	part came out of vise	QS1042	Scrap & destroy MS	07/08/08	07/03/08	QS1042	07/03/08

NOTE: Date & initial all entries

Date:
User:

Wednesday, 1/31/2007 2:19:07 PM
Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE

Job Number: 30556

Part Number: D2741

Job Number:



Seq. #: Machine Or Operation:

Description :

4.0 QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

J.F. MS 07/03/04 (40)

5.0 QC8

SECOND CHECK



Comment: SECOND CHECK

SB 07/03/07 (40)

6.0 SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

FF 07-03-08 (40)

1-Deburr

MF 07-03-08

2-Bend per Dwg D2741

SB 07/03/08 (39)

7.0 QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

11/07/03/08 (39)

8.0 PG

PURCHASING



Comment: PURCHASING

Issue P/O: 3268

07/03/08 (39)

Harden material as per Dwg D2741

Min. Ultimate Tensile Strength = 152 ksi (30-40 HRC)

Min. Yield Tensile Strength = 141 ksi

Test report or Certification required

9.0 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive and Inspect for transit damage

Ensure Test report or Certification attached



07/03/08 (39)

10.0 QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/04/12 (39)

11.0 SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Grind off carbon deposits

MS/A.M

07-04-18 (39)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA:  Date: 07/04/20 _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 1/31/2007 2:19:07 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE

Job Number: 30556

Part Number: D2741

Job Number:



Seq. #: Machine Or Operation:

Description :

12.0 POWDER COATING

POWDER COATING



M103706



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

44

07-04-18 39

13.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



John



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

14.0 PACKAGING 1

PACKAGING RESOURCE #1



John



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

15.0 QC21

FINAL INSPECTION/W/O RELEASE



John



Comment: FINAL INSPECTION/W/O RELEASE

07/04/00

Job Completion



John

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	30556
Description: Blade	Part Number:	D2741
Inspection Dwg: D2741 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

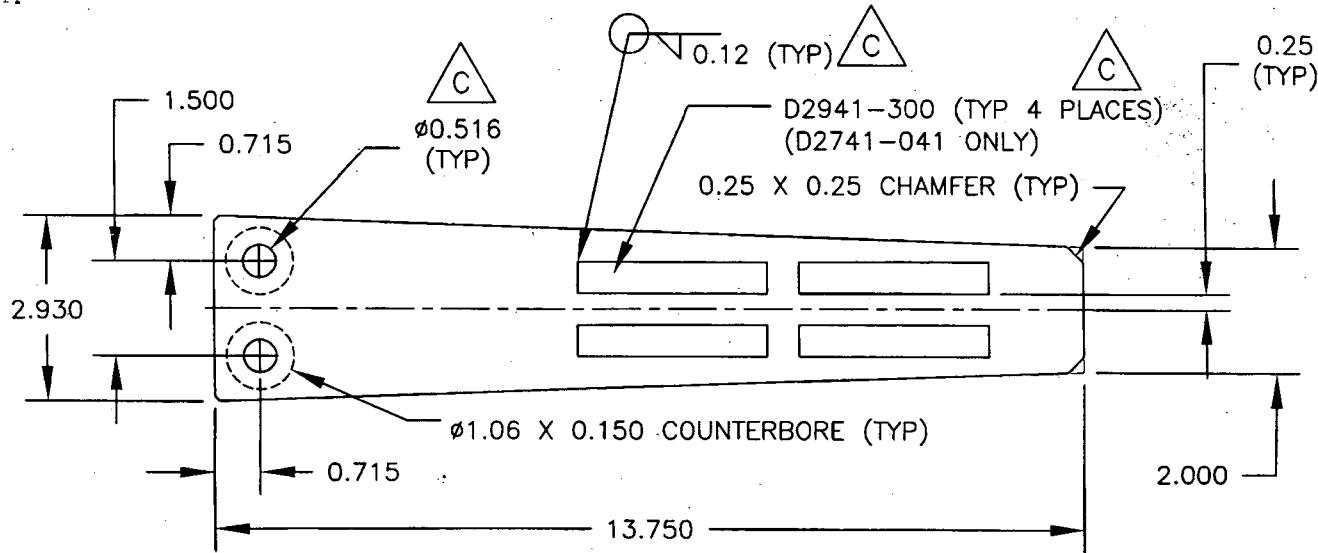
X First Article Prototype

Measured by:	Mb	Audited by:	Onf	Prototype Approval:	N/A
Date:	07/03/04	Date:	07/03/04	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.12.22	New Issue	KJ/RF	
B	06.03.09	Revised per Rev. C	KJ/JLM	<i>[Signature]</i> <i>[Signature]</i>

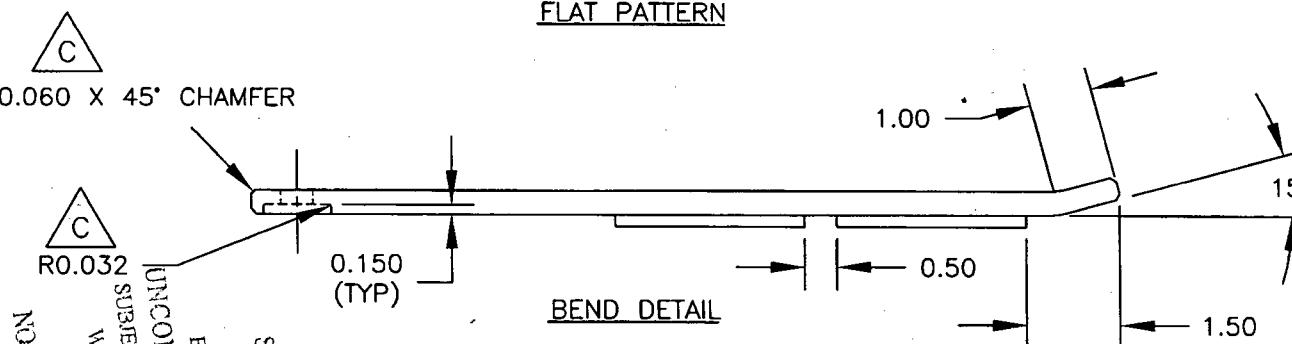
DART**RELEASED**
06.02.07

DESIGN <i>PH</i>	DRAWN BY <i>JH</i>	DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED <i>AT</i>	APPROVED <i>AT</i>	DRAWING NO. D2741
DATE 06.01.12	TITLE BLADE	SHEET 1 OF 1
A 98.04.16	NEW ISSUE	SCALE 1:3
B 98.09.01	CHANGE C'SINK TO C'BORE	
C 06.01.12	LARGER HOLE, ADD RADIUS AND CHAMFER ADD -041/-043 OPTIONS	



FLAT PATTERN

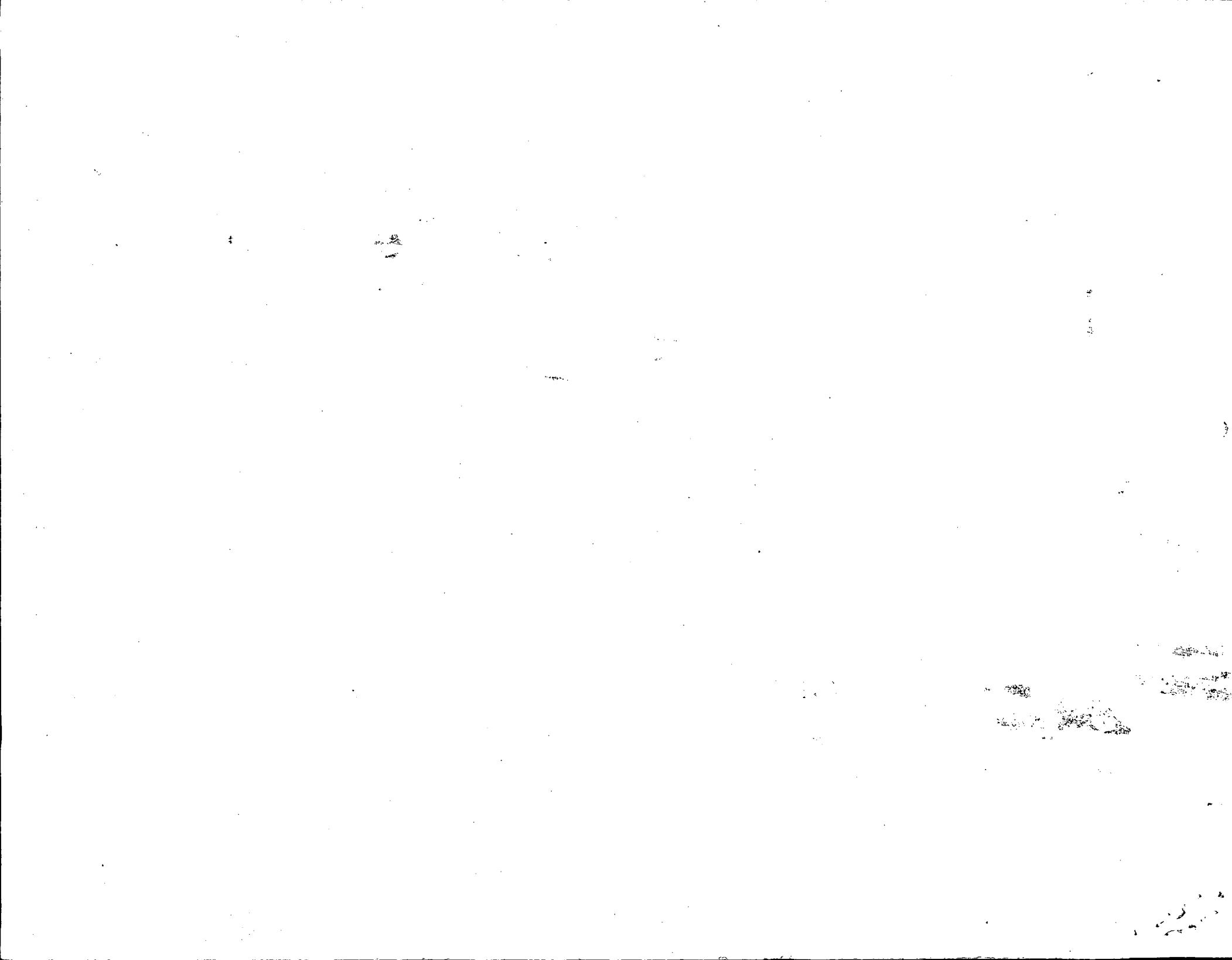
BEND DETAIL



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 3056

- 1) MATERIAL: AISI 4130 STEEL 0.375 THICK
MIN. ULTIMATE TENSILE STRENGTH = 152 ksi (34-40 HRC)
MIN. YIELD TENSILE STRENGTH = 141 ksi
- 2) FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.030 TO 0.060
- 6) TO MAKE D2741-041, WELD D2941-300 (4) AS SHOWN ABOVE.
REMOVE POWDER COAT FROM SURFACE OF D2941-300
- 7) TO MAKE D2741-043, WELD 7560 HARDCOAT ROD INSTEAD OF D2941-300

C**C**





VAC AERO
INTERNATIONAL INC.

RELEASE NOTE

GST No. : R105468102

OAK 85251-1

HEAD OFFICE
1371 SPEERS ROAD, OAKVILLE, ONTARIO
CANADA L6L 2X5
TEL: (905) 827-4171 FAX: (905) 827-7489

2009 WYECROFT ROAD, UNIT B
OAKVILLE, ONTARIO
CANADA L6I 6J4
TEL: (905) 827-7377 FAX: (905) 827-1380

QUEBEC DIVISION
7450 RUE VÉRITÉ STREET, ST. LAURENT, QUÉBEC
CANADA H4S 1C5
TEL: (514) 334-4240 FAX: (514) 334-6269

04/05/2007
MM / DD / YYYY

PAGE : 1

1DAR01

BILL TO: DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

SHIP TO: DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON

K6A 1K7

K6A 1K7

DATE SHIPPED	SHIP VIA	F.O.B.
04/05/2007		ORIGIN
CUSTOMER P/O No.	JOB No.	TERMS
3268		COD

PART No.	DESCRIPTION	UOM	QTY ORD	QTY SHPD	TEST RESULTS
D2741	Process Specifications: HARDENED PER DWG. D2741 TO 152 KSI MINIMUM 100% HARDNESS TESTED PER ASTM E-18: HRC 34-40 MATERIAL: 4130	EA	39	39	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 100% HARDNESS TESTED 39 PCS. 37/38 HRC </div>
	B30556				<div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;">V.A.I.O. TH. 25 QC</div>

I hereby certify that the material covered by this release note has been inspected and tested and conforms to all specifications relevant thereto in accordance with the conditions of the contract / or purchase order.

ON BEHALF OF VAC AERO INTERNATIONAL INC.

Laura Geerman
Authorized Q.C. Inspector

V.A.I.O.
TH.
25
QC



VACUUM BRAZING · HEAT TREATING · SPECIAL PROCESSING · FURNACE EQUIPMENT
TURBINE COMPONENT OVERHAUL · PLASMA AND OTHER COATINGS

